



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,812	01/17/2007	Mitsuo Nakamura	295170US0X PCT	2185

22850 7590 12/31/2008  
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
----------

TSO, LAURA K

ART UNIT	PAPER NUMBER
----------	--------------

2875

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

12/31/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/590,812		NAKAMURA ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Laura Tso		2875	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on Preliminary Amendment (11/26/07).
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 6-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 January 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____.                                     |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/16/08,3/2/07,8/25/06</u> .                                  | 6) <input type="checkbox"/> Other: _____.                         |

## **DETAILED ACTION**

### ***Specification***

The disclosure should be carefully reviewed to ensure that any and all grammatical, idiomatic, and spelling or other minor errors are corrected.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 16-19, 21-24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2002-56737 (hereinafter Seiko).

Seiko discloses an EL sheet (3) arranged between a plurality of switch mechanism portions and a plurality of key top portions, wherein the electroluminescence sheet includes a light emitting layer (3), transparent electrode layers (2), power supply wires (inherent), a transparent protection film (1), dielectric layers (4), and a back surface electrode layer (5), as claimed. Furthermore, Seiko, discloses an illuminated switch for use in a portable information terminal or the like, wherein the EL sheet is disposed between the key operating pad (11), which corresponds to a key top, and a base sheet (7), which comprises a dome shaped movement contact and fixed contacts (figure 2). Seiko discloses the EL sheet configured from a light emitting layer (3) which is formed by mixing and stirring zinc sulfide into a binder as a fluorescent material. The electroluminescent sheet includes a back insulation layer arranged on the back electrode layer. The claimed method is inherent over the device.

Seiko does not disclose the thickness of the transparent substrate. To choose to adjust the thickness of the transparent substrate to achieve a desired result is well within the scope of one versed in the art.

Seiko does disclose pads (11) but does not disclose they are formed of resin. To choose to form the pads of resin which is lightweight and inexpensive to achieve a desired result is well within the scope of one versed in the art.

Claims 1, 2, 6, 7, 9-15, 20 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2002-56737 (hereinafter Seiko) and JP 6-70195U (hereinafter Mitsubishi Cable).

Seiko discloses an EL sheet configured from a light emitting layer (3) which is formed by mixing and stirring zinc sulfide into a binder as a fluorescent material, a transparent conductive film (2), which comprises a transparent conductive polymer, a transparent substrate (1) which corresponds to the transparent protective film, an insulating layer (4), a back surface electrode layer (5). Furthermore, Seiko, discloses an illuminated switch for use in a portable information terminal or the like, wherein the EL sheet is disposed between the key operating pad (11), which corresponds to a key top, and a base sheet (7), which comprises a dome shaped movement contact and fixed contacts (figure 2). Seiko discloses a plurality of switch mechanisms and associated keys (figures 1, 3, 5).

Seiko does not disclose the thickness of the transparent substrate. To choose to adjust the thickness of the transparent substrate to achieve a desired result is well within the scope of one versed in the art.

Seiko does not disclose the EL phosphor particles have a damp-proof coating formed on the surface thereof. Mitsubishi Cable discloses a device wherein a 0.2  $\mu\text{m}$  thick  $\text{SiO}_2$  layer is provided around the outer periphery of the fluorescent substance as a moisture shielding film. It would have been obvious to one of ordinary skill in the art at the time the invention was made to place a moisture proof coating on the surface of the EL particles of Seiko, as taught by Mitsubishi Cable, to prevent the particles from having moisture deteriorate its characteristics.

Seiko does not his device is used in a mobile communication apparatus. This is considered a claim toward intended use and does not distinguish the instant invention

from the prior art of Seiko, particularly since Seiko may be used in a mobile communication apparatus.

Claims 3, 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2002-56737 (hereinafter Seiko) and JP 6-70195U (hereinafter Mitsubishi Cable) and further in view of JP 8-20772 (hereinafter Mitsubishi Materials).

Seiko does not disclose the claimed average particle diameter and /or particle size distribution of the EL fluorescent particles. To choose to adjust the particle diameter or particle size distribution of the EL fluorescent particles to achieve a desired result is well within the scope of one versed in the art.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura Tso whose telephone number is 571-272-2385. The examiner can normally be reached on M-F 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 571-272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Laura Tso/  
Primary Examiner  
Art Unit 2875